In vivo radiosensitization in U-87 MG tumor xenografts after Ad-EGFR-CD533 infusion. To determine the effect of EGFR-CD533 on tumor radiosensitization, U-87 MG tumor xenografts measuring 8 to 10 mm in diameter were infused in vivo with AdLacZ or Ad-EGFRCD533 as described in "Material and Methods". This technique routinely yielded transduction efficiencies of 59 to 65 % (data not shown), as determined by x-gal staining of single cells, derived from tumor digests 3 days after AdLacZ infusion. Irradiation was performed three days after Ad infusion as described. In this study, 3 fractions of 3 Gy were used based on the in vitro studies showing enhanced radiosensitization with Ad-EGFR-CD533 transduction after repeated radiation exposures (Figure [31] 33). Twenty-four h post-irradiation, tumors were digested to single cell suspension and ex vivo clonogenic survival was the treatment end point. The results presented in Figure 33 show that the treatment with Ad-EGFR-CD533 and radiation resulted in a 44% survival reduction relative to the control treatment with AdLacZ and radiation (10.4 vs. 18.5% survival; $P < 0.001$). The plating efficiencies of tumor cells from AdLacZ- and Ad-CMVEGFR-CD533- infused tumors were similar (6.79 vs. 6.14%, $p>0.5$).

In the Claims: Please amend claims 19, and 20 edited versions of which follow and a clean copy of which is attached as Appendix B.

Claim 19. (Amended) A method for radiosensitizing cancer cells, comprising the step of

delivering to said cancer cells an effective dose of an expressible nucleic acid encoding a dominant negative mutant epidermal growth factor.

Claim 20. (Amended) The method of claim 19, wherein said dominant negative mutant epidermal growth factor is EGFR-CD533.

Please add new claims 33 - 35.

Claim 33. (new) A method for radiosensitizing cancer cells comprising the step of

delivering to said cancer cells an effective dose of an expressible nucleic acid encoding a

carboxy terminal truncated mutant epidermal growth factor.

Claim 34. (new) A method for inhibiting the radiation-induced proliferations of cancer cells comprising the step of

directly delivering to said cancer cells an effective dose of an expressible nucleic acid molecule encoding a carboxy terminal truncated mutant of EGFR.

Claim 35. (new) A method for inhibiting the radiation-induced proliferations of cancer cells comprising the step of

delivering to said cancer cells an effective dose of an expressible nucleic acid molecule encoding a carboxy terminal truncated mutant of EGFR.

REMARKS

Claims 1-32 are pending in the application. Claims 1-18 have been withdrawn from consideration. Claims 19-32 are currently under rejection. By this amendment, the specification and drawings have been amended as requested by Examiner as described in detail below.

Specification

Drawings. As required by Examiner, formal drawings in which the deficiencies cited in form PTO-948 have been corrected, are filed herewith. In particular, Examiner has pointed out that Figure 20B is objected to because the labels "in vivo' and "in vitro" are between both lanes and it is not clear which lane is for which result. This has been corrected in the formal drawings.

Examiner has noted that in the description of the drawings for Figure 13, it is stated that the figure represents "Transduction efficiency of Ad-EGFR-CD533 at increasing MOI". However, the figure actually represents transduction results obtained with Ac-LacZ. Applicant has hereby amended the specification to correctly describe Figure 13.

Examiner has noted that on page 50, line 27, the figure number "31" is given when the data is actually represented in Figure 33. Applicant has hereby amended the specification to correctly identify Figure 33.